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ABSTRACT

This document contains an outline of topics discussed and a statement of purpose of a conference convened to review research on economics education at the elementary school level. A major purpose of the conference was to encourage an exchange of ideas among economists and educators regarding the latest research findings and recommendations in various areas of elementary level economics education, including curriculum, teaching methods, and future program needs. Specific conference objectives were to define the state of current understanding of how children learn economics, identify priority research questions in economics education for children, and suggest organizational forms or activities that would encourage additional research. Although no formal papers were presented, discussion in the large and small group sessions centered on the following topics: (1) rationale for having children study economics, (2) curriculum development and curriculum needs, (3) appropriate economic concepts at various grade levels, (4) evaluating children's economic learning, (5) the role of the elementary school teacher, (6) research methodology, and (7) ideas to facilitate new research. For each of these topics, information is presented on scope of the questions, major approaches which have been taken in research on the topic, time periods covered by existing studies, policy implications of various research recommendations, variables which new research should consider, and methods which additional research might use. In addition, approximately 10 research ideas are suggested for each topic. A bibliography of research studies on elementary level economics education concludes the document. (DB)

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ED205457

PROCEEDINGS

1980 RESEARCH CONFERENCE ON ECONOMIC EDUCATION FOR CHILDREN

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Sponsored by:
The National Center of
Economic Education for Children
at Lesley College, Cambridge, Massachusetts
May 1-4, 1980

PREFACE

The historian, better than most, recognizes the steady advance of a discipline throughout its development. Progress may be rapid at first, followed by alternating periods of stagnation and revival as new questions, problems, insights, and motivations intertwine with the human players. Economic education is still in its youth, having begun immediately after World War II. The discipline has advanced significantly, both organizationally and conceptually, since its birth. However, in recent years, it seems to have reached a plateau far short of its initial aspirations. The National Center of Economic Education for Children was created because of a clear need to provide quality resources for young people whose current educational programs too often ignored, misstated, or minimized the importance of understanding the economic dimension of their individual and societal lives.

The learning process is highly complex and only partially understood. In particular, research on how children learn economics is scarce. The National Center of Economic Education for Children will make active use of all available knowledge to construct high-quality programs and materials. In addition, The National Center will accept the challenge to encourage actively the conduct and dissemination of new research on the process by which children learn economics. The affective domain as well as the cognitive, will be included explicitly in this effort.

In designing the framework for this conference, I was ably assisted by two colleagues, Dr. Marilyn Kourilsky (University of California at Los Angeles) and Dr. William Walstad (University of Missouri-St. Louis), who devoted significant time and effort. Our goal was to create an optimal atmosphere for the exchange of ideas among conference participants. The conference was restricted to a small group representative of all parts of the United States and several professional backgrounds.

The conference objectives were:

- to define the state of our current understanding of how children learn economics;
- to identify priority research questions in economic education for children;
- to suggest organizational forms or activities that would encourage additional research.

No formal papers were presented, hence the task of summarizing the conference in these Proceedings was a difficult one. I am grateful to Dr. William Walstad for his fine effort in writing the Proceedings and developing the comprehensive bibliography which follows his report on the research conference. The National Center staff members, Ardis Stiffler (Administrative Assistant) and Barbara Zicht (Assistant to the Director), assisted in so many ways, from organizational necessities to buoyance of the spirit, that their contributions were valued by all. And finally, my appreciation goes to the conference participants who enthusiastically shared, cajoled, discussed, argued, and created a stimulating and rewarding atmosphere for academic growth.

Stan Mengel, Director
Cambridge, Massachusetts

MISSION

An understanding of the American Economic System, its history, and the values underlying it, is indispensable to the competent citizen. That understanding is best engendered through the introduction of economic concepts in the elementary years.

The central mission of The National Center of Economic Education for Children is to help young Americans develop for themselves the economic values and attitudes which will enable them to become effective members of society. This mission will be accomplished through education in the understanding of economic concepts and the process of critical thinking.

Building on the unique resources of its parent institution, Lesley College, and providing national leadership, The National Center will serve as both initiator and catalyst in raising the level of economic literacy in the United States.

With complete academic integrity, The National Center will produce materials, support research, inform, consult, teach, and train. It will work with schools, teachers, parents, and others in the development, nationwide, of experience-based, stimulating programs designed to help American children learn to make their own choices in the economic world around them.

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CONFERENCE PROCEEDINGS

INTRODUCTION

"We are a nation of economic illiterates." This conclusion has been drawn by numerous economists, educators, and journalists who have studied the state of economic literacy in our society (Hansen, 1977). Unfortunately, few people understand how our economic system operates and even fewer can apply a basic understanding of economics to their daily lives (Porter, 1977). This ignorance contributes to poor individual decision making in the marketplace and the voting booth (Hansen, *et al.*, 1977).

To help correct this problem, economic instruction should begin at an early age. Curricular projects have been developed for elementary schools. Educational institutions have expanded in-service teacher training programs in economics for the elementary grades. Some colleges are even reassessing their elementary education major and the necessity to include economics in the program.

In this environment of curriculum development and teacher training, research on economic education at the elementary level is vital. Current research findings have potential for shaping the implementation of economics curricula, identifying efficient methods for teaching economics, and suggesting future program needs. If economic educators, curriculum developers, and teachers are to improve economic instruction in elementary schools, they need to be informed continually of the latest research findings and recommendations.

The Need for Research Review at the Elementary School Level

Unfortunately, the quantity of research in economic education at the elementary school level is limited. Dawson (1969) found only four relevant studies on this topic before 1965. A review of research by Lewis and Orvis (1971) cited only eighteen, representing about 13 percent of all economic education studies. A more recent review by Dawson (1977) showed a similar trend; only 13 percent of economic education studies discussed economics instruction in elementary schools. Finally, a survey of doctoral dissertations indicated that fewer than 25 theses have been written on aspects of elementary economic education; more than 100 theses at the secondary level exist.

Furthermore, the quality of research at the elementary level is generally poor and limited in scope. Walstad (1978) found inadequate designs, small sample sizes, and poor statistical procedures in a number of research studies reviewed. Prior research evaluated only two curricular projects, *Our Working World* (Senesh, 1963) at the primary level and *Elementary School Economics* (Rader, 1965) at the elementary level, in any comprehensive fashion, with most other curricular projects evaluated in only one study. In addition, the lack of nationally normed and validated test instruments to measure economic understanding or attitudes has made research difficult to conduct and results hard to interpret.

Although progress has been made in research on economics instruction at the college level (Siegfried and Fels, 1979), and the secondary school level (Brickell and Scott, 1976), no recent comprehensive evaluation has been conducted of research in economic education at the elementary level. This neglected assessment is even more surprising in light of the renewed interest in economics instruction at this level. The examples of curricular projects designed to introduce, directly or indirectly, economics instruction into the elementary school curriculum are numerous: *Adventure Economics* (Light, *et al.*; 1971, Fogel, 1975); *Mini-Society* (Kourilsky, 1974); *USMES* (EDC, 1976); *Master Curriculum Guide* (Hansen, *et al.*, 1977; Davison, *et al.*, 1977; Kourilsky, *et al.*, 1978); and *Trade-offs* (Meszaros, 1978). Thousands of dollars also have been spent on providing in-service and pre-service teacher training in economics at the elementary school level. Information on the impact of new curricular projects and training programs is either lacking or buried in various publications.

Conference Purpose and Objectives

Given the above problems and recent curriculum development, a current review of research in economic education was needed. Previous reviews by Lewis and Orvis (1971), Dawson (1969; 1977), and Walstad (1978) provided useful summaries and starting points for a discussion of research needs, but new work was conducted since those reviews were written. Also, most prior work examined elementary economic education in the overall context of economic education at the pre-college level. The present curricular interest in economics instruction justified a research conference targeted at the elementary level.

To begin a review of research on elementary economic education, an interdisciplinary conference was sponsored by The National Center of Economic Education for Children. The conference objectives were:

- to define the state of our current understanding of how children learn economics;
- to identify priority research questions in economic education for children;
- to suggest organizational forms or activities that would encourage additional research.

The rationale for the first objective is obvious given earlier statements: Much time had elapsed since prior discussion of research needs. What past conclusions are still valid? What topics need more investigation? What summary statements and recommendations can be made about research quantity and quality? Answers to these questions based on past efforts offered a basis for a new assessment. Researchers from several fields (economics, economic education, teacher education, marketing, and psychology) were included in the conference to broaden the scope of previous assessments.

For the second objective, limited research funds and personnel meant a choice had to be made concerning which topics should be investigated first. For example, should priority be given to studies on the level of economic understanding, retention in economics, test instruments, curriculum evaluation, alternative teaching methods, or the value of teacher training? It was hoped that assigning priority weights to research questions would lead to a more efficient, comprehensive approach to research in the field.

The third objective may be the most important. The quantity and quality of research at the elementary level are limited and a plan needs to be developed to encourage additional quality research. What incentives would encourage new research? What organizations could be established or used to promote more interdisciplinary efforts? The long-run benefits of promoting additional research are improved understanding of economic education for children.

Thus, the conference objectives called for an analysis of past research, an identification of present research needs, and ways to promote future research activity. The summary describes how these broad objectives were interpreted by the conference participants.

CONFERENCE SUMMARY

The wide range of topics discussed in the conference sessions reflected an open organizational format designed to encourage participant communication. The major comments from the large and small group sessions are highlighted in the following sections:

1) Why Economic Education for Children?
2) Developing the Curricular Commitment
3) Economic Concepts and Grade Levels
4) Determinants of Children's Economic Learning
5) Role of the Elementary Teacher
6) Research Methodology
7) Ideas to Facilitate New Research

1) Why Economic Education for Children

The first question addressed at the conference was "Why should society teach economics to children?" The question seeks a rationale for economics instruction at young age-levels, and as such, the answers to the question include philosophical statements or value judgments, rather than specific research conclusions. Research can contribute to an understanding of cognitive and behavioral outcomes associated with a specific treatment. However, value structures are required to determine the utility of those outcomes. Nonetheless, the responses are important since a strong rationale for teaching economics at this level implies a need for research on how to provide the best economics instruction.

A number of arguments in favor of economic education were presented by the participants. Economic education can be justified on the grounds that it concentrates on concepts needed by children *and* adults in order to act efficiently in their roles as consumers, workers, citizens, and family members. In fact, economic education can help children move from a situation in which they merely cope with their economic world to a situation in which they understand their economic world and take a more active role in it. Economic instruction, due to its analytical nature, will contribute to general education, critical thinking, and problem solving. So, economic education appears to benefit both the individual and society.

Why the focus on children and schools? Waiting to provide instruction in economics until high school or college significantly reduces the number of people exposed to the subject. Early exposure to economics and continual application of economics principles to life events throughout all grades may help maximize the long-term impact and usefulness of instruction in the subject. Moreover, the unique nature of economics makes informal learning difficult and necessitates a more formal approach as found in the schools. Devoting more school resources to economics instruction may be justified, given the positive externalities or spill-over benefits from teaching economics.

2) Developing the Curricular Commitment

While a strong case can be made for the economic education of children, a basic problem remains: Economic education is not widely accepted in elementary schools. How can change be brought about within school systems so that more economic instruction is included? Here, research can be of assistance. A national survey should be conducted among elementary students, teachers, and administrators to find out what these consumers perceive the economic education product to be. Is economic education viewed as propaganda for business or as a legitimate subject for classroom instruction? To what extent is economics presently being taught? What percent of the school day is actually available for classroom teaching of economics? How do teachers and administrators view the importance of economics in relation to other subjects taught in elementary school? Many questions could be asked in this national survey to obtain baseline data for promoting curricular change.

In addition to obtaining descriptive information on what school district personnel think about economic education, some participants suggested the need for a thorough review of general education literature by economic educators. This review would be helpful in two respects. First, the goals of education can be identified, and the ways economic education fits within these goals can be illustrated. This analysis can be useful in defining the role economic education should play in the elementary classroom. Second, a literature review could identify the variables which most influence the adoption of new educational programs. Understanding those variables might facilitate adoption of economics programs. For example, are state mandates important for the inclusion of more economics at the elementary level? Policy research on the goals of education and important change-agents may offer new ways to expand economics instruction.

One potential variable influencing what gets taught in the school system is the textbook. Again, the policy implications from descriptive research may serve to promote more economic education. A continuing content analysis of elementary texts can uncover what economic concepts are stressed. If the content study shows that the social studies texts are not effective in presenting economics or do not include important concepts, then the development and use of supplementary economics materials may be necessary. The information can also be used to influence textbook writers to include more economics or help teachers select those texts with the greatest economic content.

Another factor which participants thought required more examination was the impact of economic education on other subjects. Some elementary teachers state that if more economics is taught, less time will be available for teaching the basic subjects (reading, writing, and math) or other subjects. The fallacy occurs when teachers confuse the amount of instructional time spent on a subject with the amount of learning.

More research in this area may strengthen the rationale for economic education. When a new economic education program is adopted, researchers or evaluators need to demonstrate that not only does the program improve students' economic understanding, but it also improves, or at least does not inhibit, growth in students' general achievement. In other words, research could illustrate how economic instruction may complement and reinforce general education rather than substitute for it. The opportunity costs of teaching economics may be minimal since most basic skills, from vocabulary development to graphing, do involve economics.

3) Economic Concepts and Grade Levels

A most pressing subject for further investigation concerns what economic concepts *can* be learned by children and what economic concepts *should* be learned by children at each age level. Research on the "can" question might involve a study of the relationship between the psychological readiness or cognitive development of the child and the learning of economic concepts. Some research (e.g., Schug, 1980) offers initial findings on this topic. More study is needed before summary statements can be made about the degree to which children are capable of learning the major economic concepts.

Research may show that certain concepts can be taught, but the normative question about "what should be taught" remains. One normative answer is provided by the *Master Curriculum Guide*. The participants generally agreed that this list of concepts was written for the secondary level and may not be applicable to the elementary level. Explicit criteria should be stated and used to select concepts. A cost-benefit analysis of the relative efficiency of learning different economic concepts at various ages can help in the decision process. Also, selection of concepts most relevant to the child is another criterion. Finally, exploring the interrelationship between concepts or concept clusters can help sequence the instruction for later learning. No good rationale exists for what concepts should be taught. However, research on the ability of children to learn specific concepts can offer direction leading to construction of an appropriate scope and sequence for economic education.

4) Determinants of Children's Economic Learning

Many research and evaluation studies have examined or controlled for factors that influence cognitive economic learning. The major variables include age or grade level, general achievement or intelligence, sex, socioeconomic status, and prior economic understanding. These variables, with the exception of sex, show a rather predictable influence on student economic understanding. More research could be conducted on the impact of these variables on student outcomes in the affective domain (attitudes and values).

Also, other variables may be missing from the typical statistical research model. New variables for consideration would be cultural background, attendance, cognitive learning style, class size, non-school experiences (i.e., T.V., peer groups, magazines), birth order, attitudes toward school, and varied treatment interventions. Some of these variables may be difficult to quantify, but a need was expressed by participants for expanding research on potential variables influencing student learning of economics.

Moreover, most studies cover a limited time period. Researchers know little about the retention of economic understanding. Longitudinal studies examining students' ability to retain and apply economic knowledge learned from instructional intervention is costly to design and implement, and university reward-structures provide few incentives for this type of research. Nevertheless, demonstration of the long-term influence of economic instruction may be one of the most valuable areas for future research. The costs and difficulties are great, as is the potential for important findings.

5) Role of the Elementary Teacher

The role of the teacher, a major determinant of economic instruction, requires special emphasis. In practice, elementary teachers often decide what subjects are actually taught and how the subject is taught. In this context, a number of research topics are suggested. What are teacher attitudes towards economic education? Is the anxiety teachers feel about economics similar to math anxiety? Do teachers teach a topic simply because it will be tested? What is the major impact of in-service teacher training in economics? How much training in economics do teachers need? What do teachers actually implement in their classrooms after participating in an in-service workshop?

While the teacher's role offers many opportunities for research, one topic may be foremost among practicing economic educators: the incentives for curricular commitment to economic education. Is participation in an in-service course or workshop enough exposure to cause most elementary teachers to teach economics, or do other support structures need to be developed? Showing teachers that economics can be fun and easy to teach, and that it is beneficial for children may provide enough incentive for them initially to implement a program, but will the commitment continue?

The topic of pre-service economic education has been relatively unexplored. One conference participant reported that economics was ranked lowest in value among courses by prospective teachers at her college. Further research should be conducted to determine the extent of this attitude among pre-service teachers. Are these experiences national or are there different program structures which improve new teachers' views of economics for children? Studies on pre-service teachers may suggest policy changes which will improve the economic literacy of new teachers.

6) Research Methodology

Concern about the current definition of research was expressed at the conference. A distinction was made between research and evaluation. Most "research" to date can be viewed as evaluation of specific programs to determine program effectiveness. Specific policy recommendations generally result from evaluation studies, and these studies are an important source of knowledge about curricular impact. But, research hypotheses deal with the relationships among two or more variables and have clear implications for testing these relationships. For example, does the cognitive learning style of students influence their level of economic understanding? Answers to this research question have general applications to many areas beyond the specific evaluation of a program.

The role of the teacher in conducting research or evaluation studies was another concern of participants. Most participants felt teachers could be used to generate good research questions or identify areas for future study. However, using teachers to do research was rejected on the grounds of comparative advantage. Teachers simply are not equipped to do quality research, and efforts to foster research by teachers may be counterproductive. Researchers, however, need to learn more ways to transmit the practical implications of research findings to teachers.

The participants generally agreed that more qualitative research with young children should be conducted. Paper and pencil forms of measurement provide only limited information about children's economic knowledge or attitudes. Qualitative research could include interviewing students, using observational data, or using student records (e.g., logs or diaries). Parents are another source of information about what and how their children learn in and out of school. Good qualitative research broadens the field of investigation.

7) Ideas to Facilitate New Research

Numerous ideas to facilitate research were generated by participants, notably:

- the establishment of a national databank and clearing house for research
- sponsoring prizes for exemplary research papers or dissertations
- setting up a mini-grant research fund
- conducting sessions on elementary economic education research at professional meetings
- organizing a national advisory committee to coordinate interdisciplinary research efforts
- circulating an annual annotated bibliography or research newsletter
- funding a position paper about where research in economic education for children should be in ten years
- conducting research conferences on an annual or bi-annual basis.

No general agreement was reached on the priority of these ideas. The participants did agree that new incentives and more organizational support are needed to improve research quality and stimulate new work.

CONCLUSION

The Conference began an assessment of our current understanding of how children learn economics and acted to facilitate and encourage future research efforts. The organizational framework and list of research needed should serve to help focus and direct persons and groups that are current or potential researchers in this field. It was also clear that more research from a variety of academic perspectives would enrich the discipline.

The Proceedings should be viewed in a long-range perspective. Unlike previous "one-shot" conferences on research at the college and pre-college level, it is anticipated that an annual or bi-annual research conference will be held. Researchers from a variety of fields will continue to be invited, and alternative conference formats will be used. Summary conference proceedings will be published to update research findings and stimulate new ideas for future research. In this manner, the broad conference objectives can be fully achieved.

Ideas for Research or Reflection on Economic Education for Children*

Promoting Curricular Change

1. What is the "state of the art?" (What do we really know about elementary education in economics? Where is economics being taught? How? By whom? What is being taught? What is the background of teachers?)
2. How is curricular change made in economic education?
3. How are economic education materials for children developed by schools and other organizations?
4. What is the quality of texts and materials now available for teaching economics? (What are the costs and benefits of these materials?)
5. What are the operational outcomes of economic instruction for children?
6. What is the basic rationale for teaching economics to young children as perceived by administrators, teachers, parents, students, community groups, and businesses?
7. Is there a link between economics and other subjects? (How does teaching economics influence general achievement, citizenship, problem-solving skills, etc.?)
8. What is the opportunity cost of implementing economic education in elementary schools?
9. How does one integrate economics with other subjects?
10. How much economics is learned from interdisciplinary teaching versus direct instruction?

Economic Concepts and Grade Levels

1. What economic choices do children make?
2. What economic problems do children have and what do children *perceive* as their economic problems?
3. What is the economic vocabulary of children? What do they mean by the terms they use?
4. What concepts have utility for children at various ages?
5. How much economics do children learn without formal instruction? What is the source of this learning?
6. What errors do children make in regard to economics? Is there a pattern to these errors? Are they "logical" errors?
7. At what levels can particular concepts be learned?
8. When are children psychologically ready to learn economics? (What learning theories apply to economic education?)
9. What "readiness activities" are needed for economic instruction?
10. What economics can we find in children's literature? Can literature be used effectively to teach economics?

Determinants of Children's Economic Learning

1. How do students' preferred learning styles affect economic understanding?
2. What is the impact of non-school sources such as television, the street, peer group, homes, etc.?

**Based on a conference list made by George Dawson. Order is not significant and some overlapping will be noted.*

3. How much economics is retained? (How long? In what contexts? What factors explain retention?)
4. What are the effects of learning disabilities and other "special characteristics" on economic understanding?
5. What impact does economic instruction have on students' attitudes and values?
6. What consensus conclusions about the impact of age, sex, socio-economic status, intelligence, and prior knowledge on economic understanding and economic attitudes are still valid?
7. What are the interaction effects among variables influencing economic learning?
8. What teaching method works best for maximizing economic learnings and attitudes?

Role of The Elementary Teacher

1. How do teacher characteristics affect student learning?
2. What questions do teachers have about economic education?
3. How much economic education do teachers need to teach economics effectively?
4. What kind of "delivery system" is most effective in training teachers?
5. What is the long-term impact on economics instruction after participation in an in-service teacher training program?
6. How do pre-service teachers compare to in-service teachers in their views of economic education?
7. What life experiences of children can be utilized by teachers to teach economics?
8. What are the costs and benefits to teachers of alternative teaching methods, or in-service teacher education?

Research Methodology

1. What instruments currently exist to measure outcomes in economic education? What are the strengths and weaknesses of these instruments? Should new instruments be developed?
2. What observational measures or records can be used to document outcomes from economic programs?
3. What research designs are most appropriate for studying economic learning of children?
4. What types of "research" should be given emphasis: descriptive or fact finding, evaluation, or general research?
5. What opportunities exist for qualitative research studies in economic education?
6. How can quantitative measures or records be used to document outcomes of economic programs?
7. What applications does general education research have to economic education research?
8. What are the most effective incentives for encouraging additional research in economic education?

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